

### REMARKS

Claims 1-6, 8-10, 12, 13, 17-23, 25, 27, 28, 30, 32, 33 and 39-48 are pending in the application. Claims 15 and 16 have been cancelled without prejudice or disclaimer of the subject matter therein. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks herein.

#### *Claim Rejections – 35 U.S.C. § 103*

Claims 1-6, 9, 12-16, 18-23, 25, 27, 30, 32, 33 and 39-48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 5,671,362 to Cowe et al. ("Cowe") in view of U.S. Pat. No. 4,674,605 to McPherson ("McPherson").

At the outset, Applicants note that claims 15 and 16 have been cancelled without prejudice or disclaimer. Consequently, the rejection of claims 15 and 16 has been rendered moot.

Each of claims 1, 21 and 39 has been amended to include the features of each of the plurality of load sensors being positioned on a bottom surface and at respective corners of the load storage device, determining an identity of an item based on the change in load and the item database, determining a position of the load relative to the top surface of the load storage device in a plurality of dimensions based on a load distribution indicated by the load signals of the plurality of load sensors. As discussed in further detail below, Cowe and McPherson, taken alone or in combination, fails to disclose or render obvious at least these features of claims 1, 21 and 39.

As discussed in Applicants' previous responses, which are expressly incorporated herein by reference in their entirety, Cowe is directed to a materials monitoring system that includes an electronic shelf unit 10 that can sense and report product usage or withdrawals, by sensing the presence or absence of product items 30 in storage on the shelf unit (see col. 5, lines 37-40, for example). More specifically, the shelf unit 10 includes a sensing grid 32 that comprises an array of sensors that are sensitive to a product item 30 (see col. 8, lines 1-5). As illustrated in Fig. 2, for example, the sensing grid 32 is located on a top surface of the shelf unit such that the product

items 30 rest on the sensors of the sensing grid 32. In this manner, the sensing grid 32 is responsive to both weight and form parameters of the product items 30 and can provide footprints of the product items 30 resting on the sensing grid 32 (see *Id.*).

In operation, received product information, regarding new product items 30 placed on the shelf, can be input by an operator using, for example, a bar code reader, or may be received electronically, for example via the communications subsystems (see col. 9, l. 65 - col. 10, l. 2). A timed, mapped image of the footprint of items 30 is generated and is compared with a previous footprint image to yield information as to the withdrawal from or placing on of one or more items 30 (see col. 11, ll. 12-19). As provided by Cowe, “[t]o achieve the objectives of this invention, ... [m]ore appropriate is a mapping of the shelf to indicate the locations of all items,” and “[p]referably, the system calls for the entry of an item identifier for each item placed on the shelf, for example by scanning a bar code, and the software enables that identifier to be associated with a shelf storage location for that item. Such receipt data may then be referenced, by shelf location to determine the identity of an item withdrawn from the shelf unit 10” (see col. 11, ll. 20-39).

As further provided in Cowe, “when a product item 30 is placed on shelf 20, its presence is sensed and electronic shelf unit 10 automatically calls for input of a product ID” (see col. 17, ll. 4-9). For example, a “green indicator light 64 will be illuminated and the beeper will sound to prompt the user to enter the ID code associated with the item, which ID code may be entered from keypad 58” (see col. 17, ll. 16-21). As another example, “a product item 30 can first be scanned by a bar code reader ... to convey the bar code into the shelf unit processor, illuminating green light 62 to tell the merchandiser to place the scanned product item 30 on the shelf 20” (see col. 17, ll. 22-26).

Accordingly, Cowe determines whether a product item has been placed on or removed from the shelf unit by comparing a current footprint to a previous footprint, which footprints are generated based on signals from the sensing grid. The identity of the placed or removed items is determined based on an ID code manually entered by a user (e.g., vendor). Consequently, and as discussed in Applicants' previous responses, the system of Cowe can only initiate a query in

response to an item being replaced, and cannot itself resolve the query and identify the product that was replaced. Instead, the identity of the replaced item is subsequently resolved by "manual inspection during the vendor's representative's next visit." To that end, Cowe provides that each of the product items 30 includes a machine-readable label 31 (e.g., a bar code), which machine-readable label is scanned to determine the identity of a particular product item 30 associated with the shelf unit 10 (e.g., during the manual inspection of the vendor's representative).

In view of the foregoing, Cowe fails to disclose or render obvious the feature of a plurality of load sensors being positioned on a bottom surface and at respective corners of a load storage device. As discussed above, Cowe discloses a sensing grid that is disposed across a top surface of the shelf unit, such that product items rest on the sensing grid. In this manner, the requisite footprints can be generated for determining whether a product item has been placed on or removed from the shelf unit of Cowe. Cowe further fails to disclose or render obvious the feature of determining an identity of an item based on the change in load and the item database. Instead, and as discussed above, Cowe requires manual user input (i.e., inputting an ID code associated with a product item) to determine the identity of the product item. Cowe also fails to disclose or render obvious the feature of determining a position of the load relative to the top surface of the load storage device in a plurality of dimensions based on a load distribution indicated by the load signals of the plurality of load sensors. Instead, and as discussed in detail above, Cowe compares footprint images to determine whether a product item has been placed on or removed from the shelf unit.

McPherson is not asserted as disclosing, nor does McPherson disclose, the above-identified features of claims 1, 21 and 39 that are also absent from Cowe. Consequently, McPherson cannot cure the deficient disclosure of Cowe.

For at least these reasons, Cowe fails to disclose or render obvious each and every feature of claims 1, 21 and 39. Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

Each of claims 2-6, 9, 12, 13, 18-20, 22, 23, 25, 27, 30, 32, 33 and 40-48 ultimately depends from one of claims 1, 21 and 39, which define over the asserted references, as discussed

in detail above. Consequently, each of claims 2-6, 9, 12, 13, 18-20, 22, 23, 25, 27, 30, 32, 33 and 40-48 also defines over the asserted references for at least the same reasons. Therefore, reconsideration and withdrawal of the rejections are respectfully requested.

Claims 10 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cowe in view of McPherson, in further view of U.S. Pat. No. 4,961,533 to Teller et al. ("Teller"). Claims 8 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cowe in view of McPherson, in further view of U.S. Pat. No. 6,450,299 to Lysaught ("Lysaught"). These rejections are respectfully traversed.

Each of claims 8, 10, 17 and 28 ultimately depends from one of claims 1 and 21, which define over the asserted references, as discussed in detail above. Consequently, each of claims 8, 10, 17 and 28 also defines over the asserted references for at least the same reasons. Therefore, reconsideration and withdrawal of the rejections are respectfully requested.

#### *Other Claim Amendments*

Claim 17 has been amended to depend from claim 1 in view of cancelled claim 15. Claims 40, 43 and 46 have each been amended in view of amended claims 1, 21 and 39. No new matter has been entered.

### CONCLUSION

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reason for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to amendment. Applicants respectfully request consideration of any filed IDS not previously considered, by initialing and returning each Form 1449.

The undersigned attorney welcomes the opportunity to further discuss by telephone any position or issue not fully addressed by the above remarks and amendments.

No charges are believed due. However, if any fees are due, they are being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply all charges or credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 13909-0141001.

Respectfully submitted,

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